ABSTRACT

A DC/DC converter in which a ceramic capacitor can be used as a smoothing capacitor is provided. In a DC/DC converter 1, a switching element 14 is opened and closed, thereby supplying power from an input power supply V_{CC} through a coil 16 to an output terminal OUT, which is connected to a load 3, and adjusting the voltage at the output terminal OUT. The DC/DC converter 1 includes a coil current detection resistor 17 for detecting a coil current I_L; a smoothing capacitor 18, connected to the load side of the coil current detection resistor 17, for smoothing the voltage at the output terminal OUT; a reference current value control circuit 8 for detecting the voltage on the coil side of the coil current detection resistor 17 to control a reference current value of the coil current I_L; a clock generator 10 for generating a reference clock CLK; and a feedback circuit 9 for closing the switching element 14 in synchrony with the reference clock CLK and for opening the switching element 14 when the coil current I_L exceeds the reference current value.